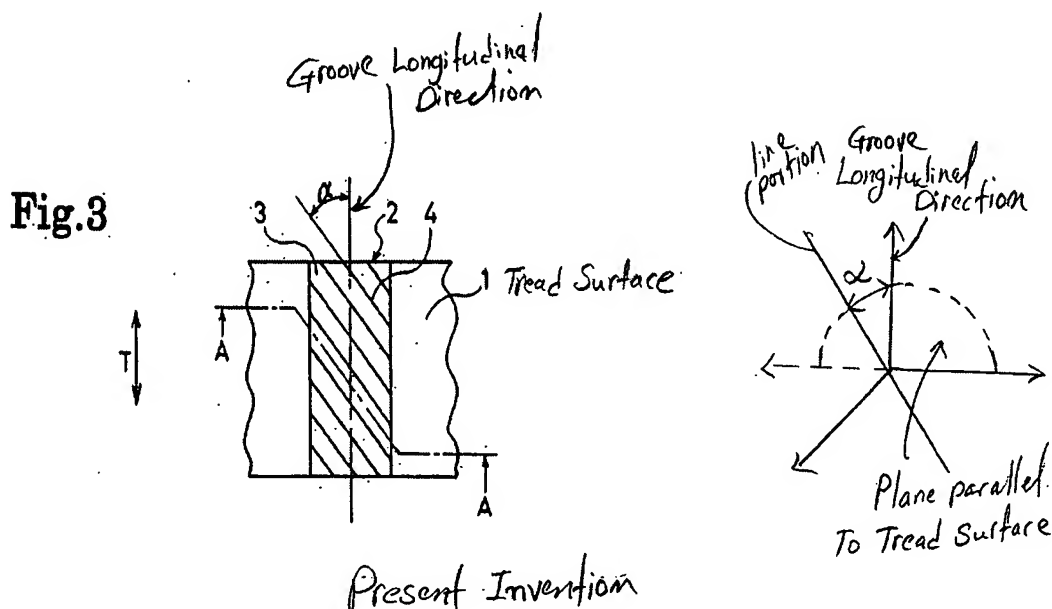


REMARKS

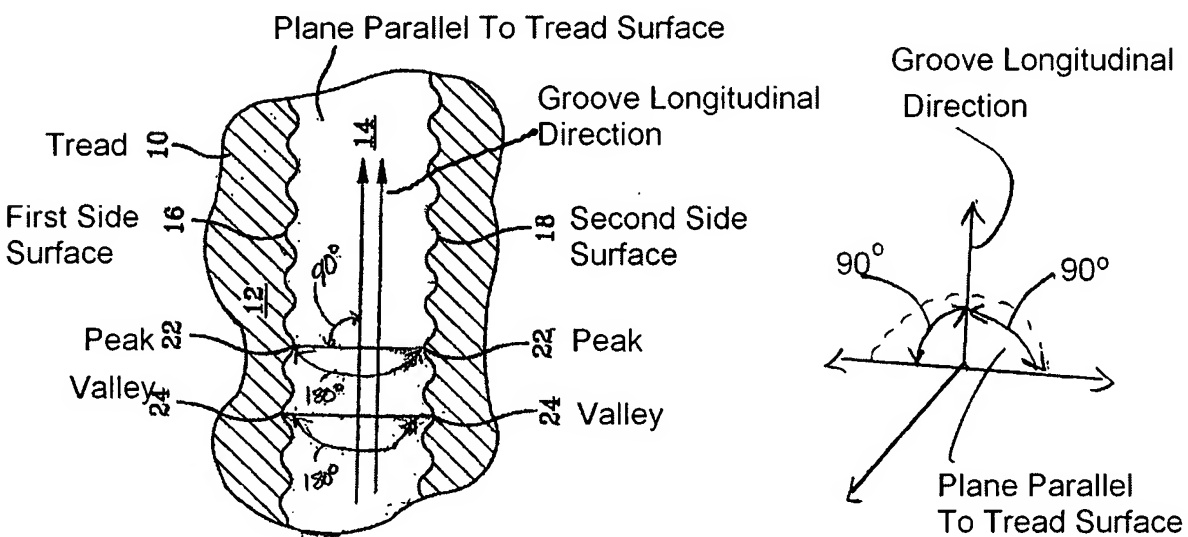
Claims 1-4 stand rejected under §102 on the basis of Shesterkin '344. Claim 5 was not rejected on this basis, and claim 1 now includes the features of claim 5. For this reason, withdrawal of this rejection is respectfully requested.

Claims 1-5 stand rejected under §102 and §103 on the basis of Heinen '835. Applicant traverses this rejection because the cited reference does not disclose or suggest ridges or recesses being inclined from approximately 10° to 60° with respect to a groove longitudinal direction, along a plane substantially parallel to the tread surface, as described in claim 1. The reference also does not disclose or suggest the lateral grooves of the present invention.

In the present invention, the ridges or recesses of the line portions are inclined with respect to the longitudinal direction of the groove by the angle α (10° to 60°) along a plane substantially parallel to the tread surface, as shown in annotated FIG. 3 below.



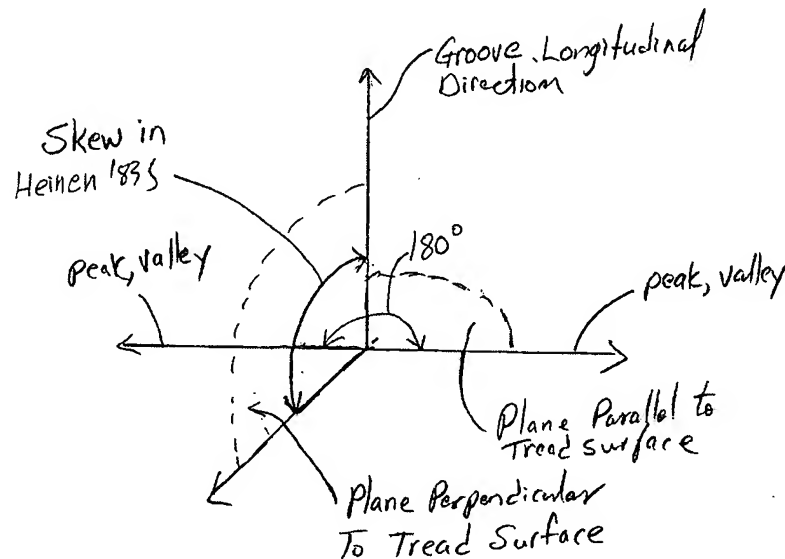
The peaks and valleys in the channels of the Heinen '835 are at 90° with respect to the longitudinal direction of the groove, along the plane parallel to the tread surface, and not 10° to 60° as in the present invention. As described in Col. 5, line 49, *et seq.*, the reference teaches that the peaks 22 and valleys 24 of the first side surface 16 are 180° out of phase from the surface peaks 22 and valleys 24 of the second side surface 18, opposite the first side surface. In other words, the peaks and valleys face each other, and are mirror images of each other. Accordingly, the peaks and valleys on opposite side surfaces 16 and 18 are necessarily at 90° with respect to the longitudinal direction of the groove (which extends between the opposite side surfaces) along the plane parallel to the tread surface as seen below.



Heinen '835

The "skewing" described in Col. 5, line 59 through Col. 6, line 10 of Heinen '835, creates an angle (45° to 90°) with respect to the longitudinal direction of the groove,

but in a plane which is perpendicular to the tread surface, and not parallel as in the present invention, as seen below. Regardless of the skew with respect to the longitudinal direction along the plane perpendicular to the tread surface, the angle of the peaks and valleys of Heinen '835 must be at 90° with respect to the longitudinal direction along the plane parallel to the tread surfaces, so that the peaks and valleys on the opposite first and second surfaces are 180° out of phase.



It is now apparent that the Heinen '835 does not disclose ridges or recesses inclined with respect to the groove longitudinal direction along a plane parallel to the tread surface.

Moreover, the line portions (4) of the present invention are oriented to encourage a spiral water flow in water progressing within the grooves (2), moving toward a center position in a cross-section of the water-flow path in the groove space. In addition, the lateral grooves extend in the tire width direction, intermittently in the tire circumferential

direction, from the grooves (2) away from the center of the tread surface. The lateral grooves are open at the edges of the shoulders (the distal ends of the lateral grooves). With this feature, water entering the grooves (2) can be externally discharged from the shoulder via the lateral grooves. Therefore, the claimed invention better prevents hydroplaning over Heinen. Accordingly, withdrawal of this rejection is respectfully requested.

For the foregoing reasons, applicant believes that this case is in condition for allowance, which is respectfully requested. The examiner should call applicant's attorney if an interview would expedite prosecution.

Respectfully submitted,

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April 26, 2007

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